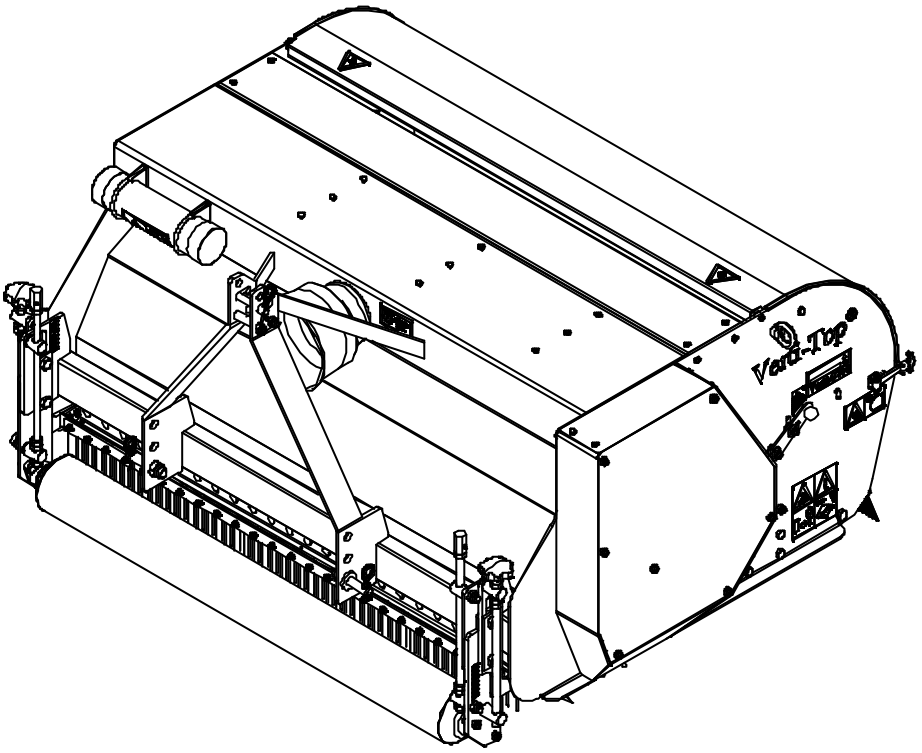
User Manual and Parts Book of the Verti-Top®

Model:

Serial number:



ATTENTION:
IT IS OF THE UTMOST IMPORTANCE TO READ THIS USER MANUAL CAREFULLY PRIOR TO USING THE VERTI-TOP® IN ORDER TO USE THE MACHINE SAFELY AND TO OBTAIN THE BEST RESULTS.

0724 English 947.120.204

FOREWORD

Congratulations on your Verti-Top purchase! For safe and long-lasting operation of this Verti-Top, it is necessary to read and to understand this user manual. It is impossible to work safely with this machine *without* complete knowledge of its content.

The Verti-Top is not a machine that works independently. It is the user's responsibility to use the correct tractor. The user must also check the tractor/Verti-Top combination on safety aspects such as noise level, user instructions and risk analysis.

The following pages deal initially with the general safety instructions. Every user should know these safety instructions and apply them. At the end of this page, a registration card is inserted. This registration card should be returned to enable us to deal with potential future claims.

This user manual lists many instructions that are numbered in sequence. You should follow this sequence. A ⚠ is an indication of a safety instruction. A means a tip and/or note.

WARRANTY CONDITIONS

WITH DELIVERY THIS VERTI-TOP IS GUARANTEED AGAINST MATERIAL DEFECTS. THIS WARRANTY IS VALID FOR A PERIOD OF 12 MONTHS FROM THE PURCHASE DATE. VERTI-TOP WARRANTIES ARE SUBJECT TO THE 'GENERAL CONDITIONS FOR SUPPLY OF PLANT AND MACHINERY FOR EXPORT, NUMBER 188' THAT ARE PUBLISHED UNDER THE AUSPICES OF THE UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE.

REGISTRATION CARD

For your own information, fill in the table below:

Serial number machine	
Dealer name	
Date of purchase	
Remarks	

! SAFETY INSTRUCTIONS !

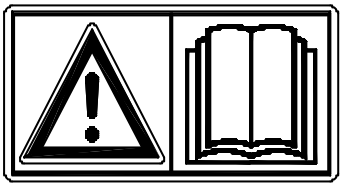


Figure 1

The Verti-Top is designed for safe use. This can only be achieved if you completely follow the safety instructions described in this manual.
Read and understand (Figure 1) the manual *before* you start using the Verti-Top.
If the machine is not used as described in this manual, this can result in injuries and/or damage to the Verti-Top.

(1) The user must be an expert in using the machine. The machine should be professionally adjusted for cultivating the subsoil.

The manufacturer will not accept any liability for unprofessional use and its resulting damage. All risks occurring with this are entirely at the expense of the user.
Not following the use, maintenance and repair instructions prescribed by the manufacturer is also considered improper/unprofessional use of this machine.

Inspect the area to be treated *before* using the Verti-Top.
Remove loose obstacles and avoid irregularities.

(2) The Verti-Top is manufactured according to the latest technical understanding and is safe to use.

When careless people use, maintain or repair the machine, danger of injuries to the user *and* to third parties can be the result. **This must be avoided!**

Always use the Verti-Top in combination with the correct tractor as described in the technical data.

(3) All persons assigned to operate, maintain and repair the Verti-Top by the owner must completely read and understand the operation manual and in particular the chapter of **Safety Instructions**.

The user is responsible for a **safe Tractor/Verti-Top combination**.
This entire combination must be tested on noise, safety, risk and user friendliness. User instructions should also be drafted.

(4) The user is **obliged to check** the Verti-Top for **visible damage and defects** before using the Verti-Top.
Modifications to the Verti-Top (including its operations) that have a negative impact on safety must be rectified immediately.
For safety reasons it is in principle not permitted to make changes or adjustments to the Verti-Top (except those approved by the manufacturer).

If **modifications** to the Verti-Top have been made, then the current CE marking is cancelled. The person that has made these modifications has to apply for a new **CE marking himself**.

Check the Verti-Top for loose bolts, nuts and components *before* every operation.

If present, check the hydraulic pipelines regularly and replace these when the hydraulic pipelines are damaged or appear old. The replacing pipelines should comply with the technical requirements of the manufacturer.

If present, you should **always** make the hydraulic installation pressure-free *before* working on this installation.

NEVER use the Verti-Top in the absence of protective guards and safety stickers.

The inspection hatch **MUST** be closed when using the Verti-Top. (Figure 2)

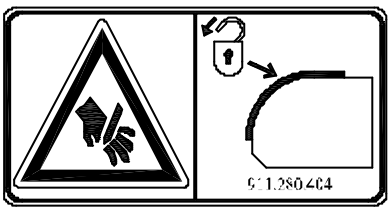


Figure 2

Figure 3

BE CAREFUL not to get any parts of your body jammed when opening the inspection hatch. (Figure 3)

NEVER crawl under the Verti-Top.
If necessary, tilt the Verti-Top.

NEVER step off the tractor while the motor is running.

In case of maintenance, adjusting and repairs, it is necessary to block the Verti-Top in order to prevent sinking away, driving off and/or sliding off.

Always switch off the tractor motor, take the tractor's key out off the ignition and disconnect the PTO in case of maintenance, adjusting and repairs. (Figure 4)

Figure 4

With regards to the safety of the machine and the user, use only original Verti-Top parts for maintenance and repairs.

Only authorised technical personnel may carry out repairs to the Verti-Top.

Keep a record of the repair activities.

(5) The general applicable health & safety (Dutch acronym: ARBO) regulations must also be followed in addition to the instructions in this user manual.

Relevant traffic regulations also apply in case of using public roads.

Transporting persons is not permitted!

Do not use the Verti-Top in the dark, in heavy rain/storm or on slopes with an angle larger than 20 degrees.

(6) All persons that are going to operate the Verti-Top must be familiar with all the functions and control elements of the Verti-Top *before* starting any work activities.

Attach the Verti-Top to the towing vehicle according to the regulations. **(Danger of injuries!)**
Check whether you have a clear field of vision – both close by and far away – *before* you depart.

Safety stickers with an identical meaning are attached to the sideboard (Figure 4, 5 and 6) and to the rear cover (Figure 7) of the Verti-Top. These safety stickers must always be clearly visible and legible and must be replaced in case they have become damaged.

During operation, **NO persons are allowed within the danger zone** of the Verti-Top, because there is danger of physical injuries caused by flying particles or substances (Figure 5).

Figure 5

Figure 6

Keep a distance of minimum 4 metres! (Figure 6)

Pay attention to the permitted lifting capacity of the towing vehicle.

Dress appropriately. Wear sturdy shoes with steel toecaps, long trousers and tie up long hair. Do not wear loose clothing.

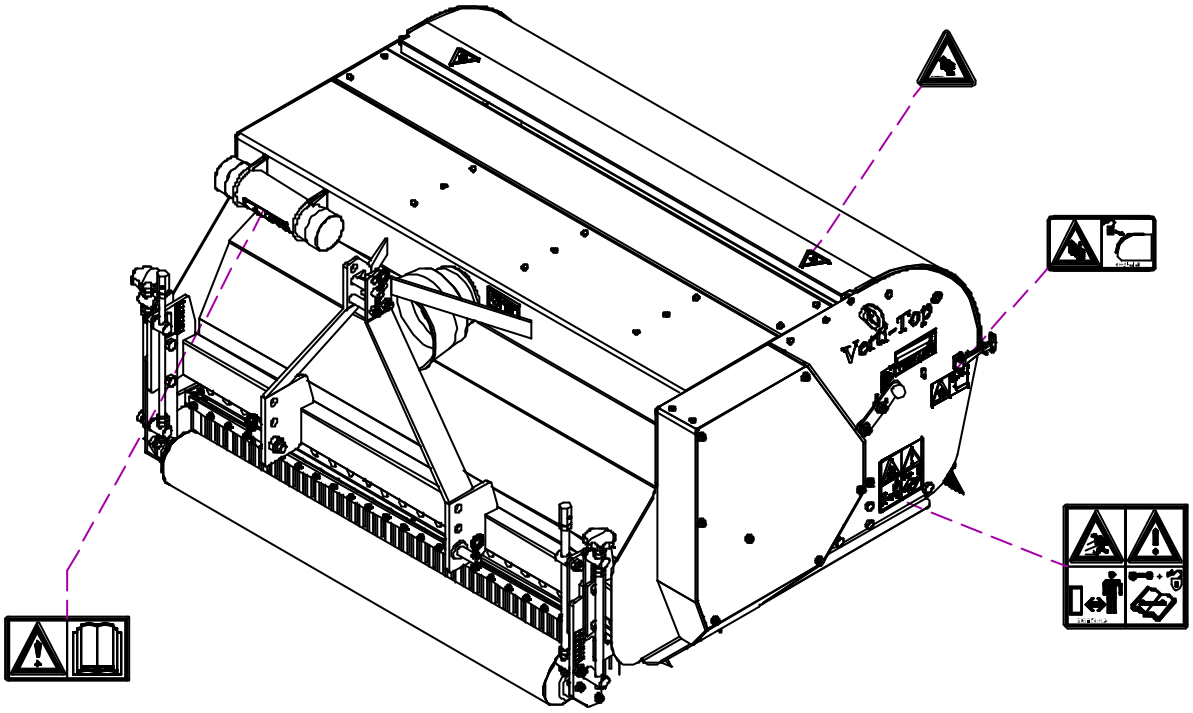


Fig.7

(7) Location of the safety stickers (on both sides of the machine) (Figure 7)

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1.0 TECHNICAL DATA

Model	1500-2
Working width	1.47 m (57.8”)
Working depth (In case of a non-worn brush)	0 mm-26 mm (0”-1.02”)
Speed	Maximum 12 km/h (7.5 mph)
Weight	445 kg (981 lbs) 515 kg with VAC unit (1,135 lbs)
Recommended tractor	25hp with minimum lifting capacity of 525 kg (1,157.4 lbs) With VAC unit: 25hp with minimum lifting capacity of 600 kg (1,322.8 lbs)
Content of the receptacle	170 litres (6.0 cu. ft.)
Maximum capacity (Theoretical at maximum speed of 12 km/h [7.5mph])	17,616 m^2/h (129,921 ft^2/h)
Mesh of jigging sieve (Standard supplied)	5 mm x 5 mm (0.2 “ x 0.2”)
Transport dimensions	L x W x H 1,350 x 1,710 x 1,000 mm 53,2” x 67,3” x 39.4”
Three-point connection	Cat. 1
Oil gearbox	SAE 90
Grease	EP 2
Standard components	Front and back roller Jigging sieve, adjustable according to cleaning level Integrated adjustable rake Dirt receptacle that can be tipped over Easily exchangeable sieve Integrated sliding brush that follows the terrain PTO axle Manual cylindrical container including tools
Optional	Sieve elements with various mesh dimensions Vacuum unit for dust particles

2.0 FIRST INSTALLATION – TAKING THE MACHINE OFF THE PALLET

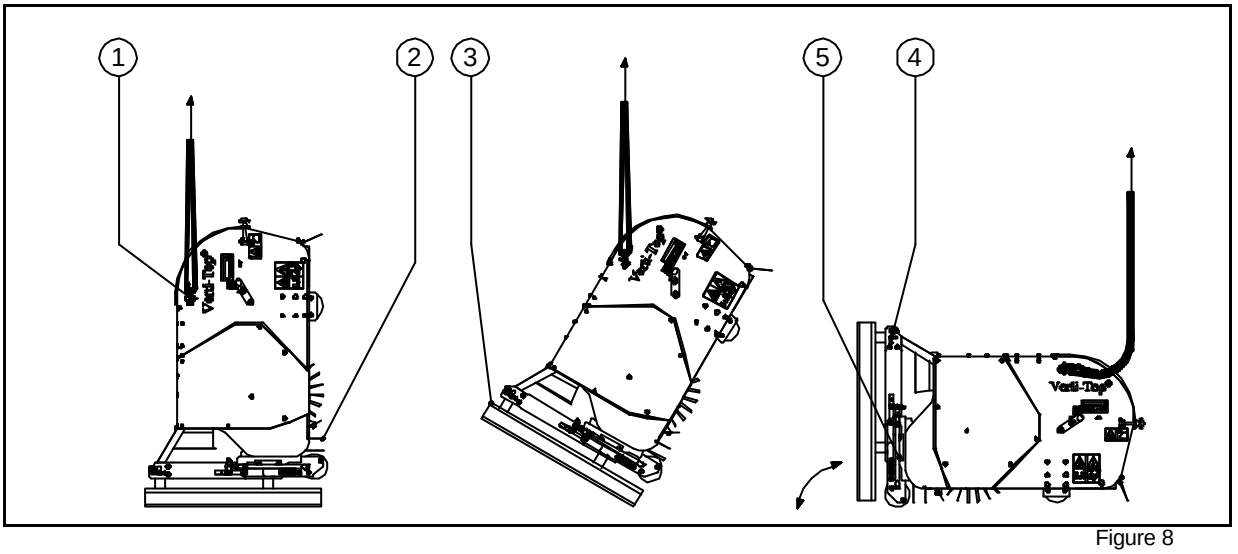

Figure 8

The machine is placed vertically on the pallet. To remove the pallet and to place the machine horizontally on the ground, you take the following steps (see Figure 8):

⚠ **NEVER CRAWL UNDER THE MACHINE!**

1. Attach a cable to the lifting eyes: one on both sides of the machine.

   ⚠ **Make sure that the cable/crane/lift can hoist minimum 600 kg (1,323 lbs).**

   ⚠ **Make sure that the rake section (2) is turned upwards and cannot be damaged when the machine is put on the subsoil.**

2. Lift the machine including the pallet approx. 50 mm (2") off the ground.
3. Take care that the machine is standing on the edge of the pallet (3).
4. Lower the machine controlled and calmly until it stands completely on the subsoil.

   ⚠ **CAREFUL: KEEP YOUR DISTANCE; THE MACHINE CAN SLIDE!**

5. Dismantle the top rod pin and let the pallet (3) rotate carefully around the 3-point pins (5) until it stands on the subsoil.
6. Remove the bottom 3-point pins (5) and remove the pallet (3).
7. Connect the machine to the tractor (please refer to Chapter 5).

   ⚠ **Use the proper tractor (please refer to the specifications).**

   ⚠ **Turn off the tractor and secure the tractor/Verti-Top combination against driving off and/or sliding off.**

8. Prepare the PTO to fit the Verti-Top/tractor combination (please refer to Chapter 4).

3.0 LIST OF GENERAL COMPONENTS

Figure 9 shows several important components:

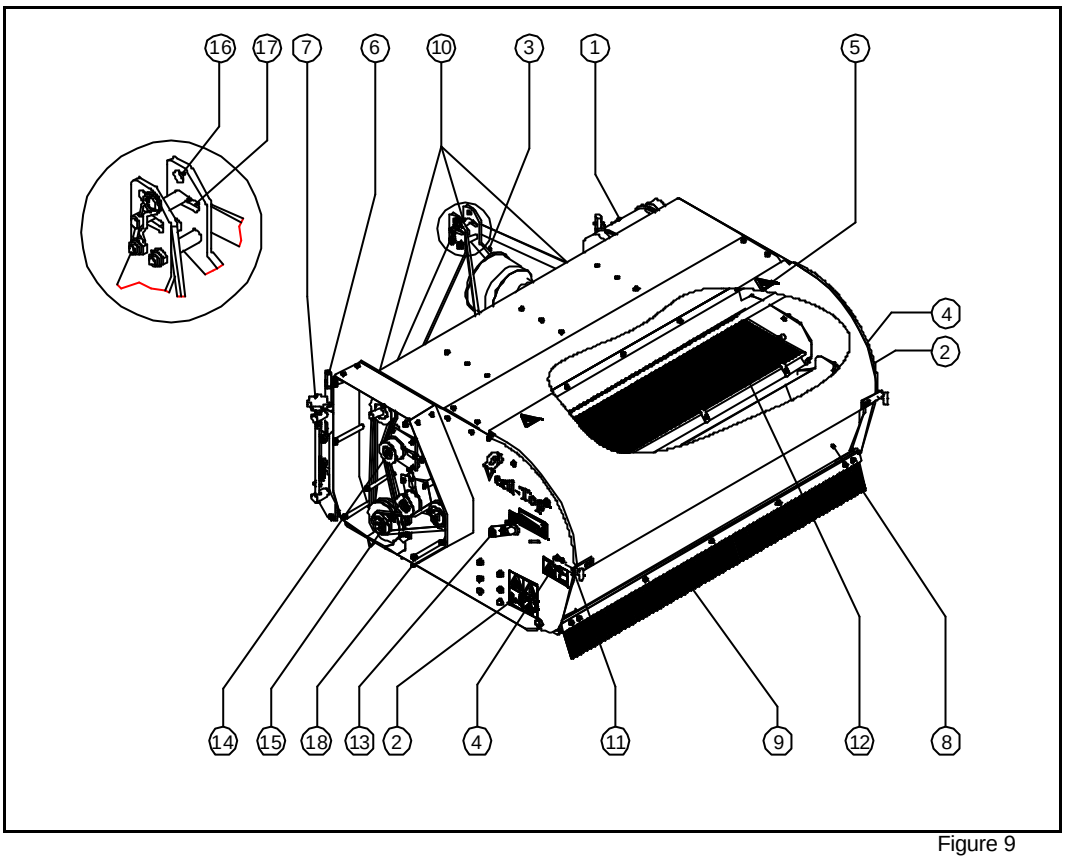

Figure 9

1. Safety sticker 900.280.402; first read the user manual / toolbox before using it.
2. Safety sticker 933.280.402; keep a minimum distance of 4 metres from the machine. Stop the motor if repair or adjustment is needed. Watch out for flying particles and substances!
3. The serial number is located at the front side of the machine.
4. Safety sticker 911.280.404; the inspection hatch **MUST** be closed when using the machine.
5. Safety sticker 900.280.404; **BE CAREFUL** not to get any parts of your body jammed.

⚠ **All the safety stickers should be on the machine at all times and should be understood.**

6. Adjustable front roller for setting the working depth
7. Adjustable rake
8. Dirt receptacle that can be tipped over
9. Sliding brush that follows the terrain
10. 3-Point connecting pins
11. Latch for the inspection hatch
12. Jigging sieve adjustable according to cleaning level
13. Adjusting handle of the angle of the jigging sieve
14. Adjustable belt tensioner for the drive of the rotating brush
15. Adjustable belt tensioner for the drive of the jigging sieve
16. Hole for transporting position and fixed operating position
17. Slotted hole for terrain-following operating position
18. Rotating brush

4.0 THE PTO

The PTO is a very important component that takes care of the drive from the tractor. It also takes care of safe use of the machine, provided it is installed and maintained in the correct manner. The PTO has its own CE certification. Read the PTO manual. This manual is located on the PTO.

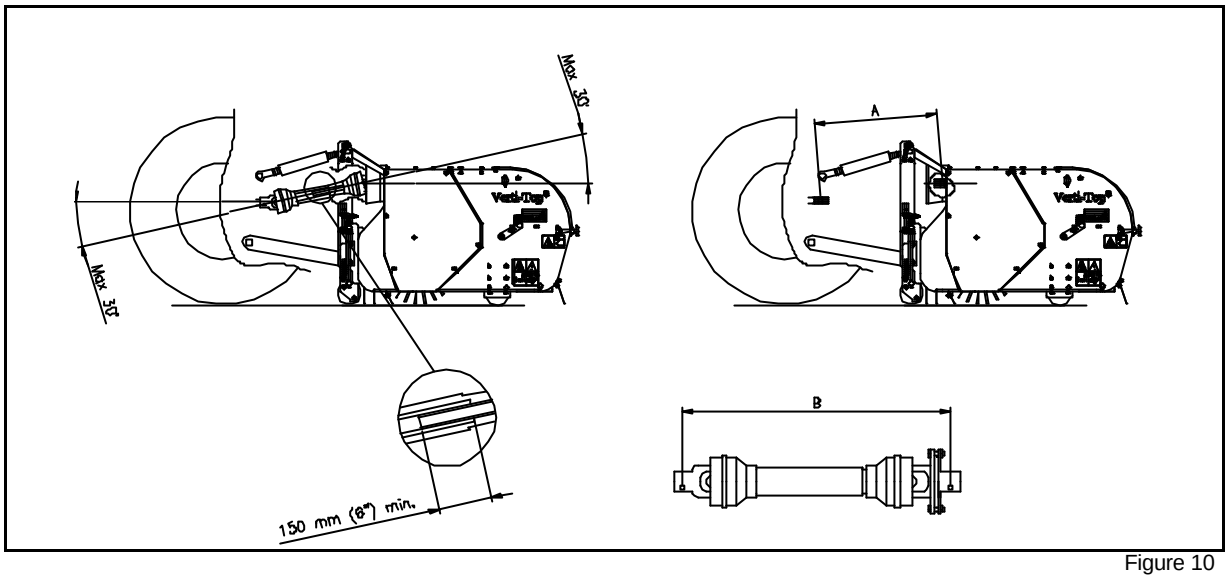

Figure 10

4.1 LENGTH OF THE PTO (Figure 10)

The length of the PTO is very important. If it is too long, it can damage the drive of the tractor and/or the Verti-Top.
If the overlapping length of the cylinders becomes less than 150 mm (6") at any time, it can damage the PTO.

⚠ **The length changes when the machine is lifted or when a different tractor is used!**

In order to set the PTO on the correct length, when a new one has been purchased or when a different tractor is used, follow these steps:

1. Connect the Verti-Top to the tractor as described in Chapter 5.

⚠ **Switch off the tractor and make sure that the tractor is blocked well and cannot move on its own accord!**

2. Lower the Verti-Top onto the subsoil until it stands on the front and back roller.
3. Measure the distance between the PTO connection of the tractor and the PTO connection of the Verti-Top from notch to notch.
4. Measure the distance B of the PTO in its shortest position from the locking pin to the locking bolt.
5. Divide the PTO in two parts and remove the protection cap at both ends.
6. The ends of the cylinders and the ends of the protection caps must be made shorter: (B-A) + 75 mm (3").
7. Smooth off all components, use some grease and subsequently, assemble all components.
8. Mount the PTO with the cam clutch at the Verti-Top side.
9. Attach the other end of the PTO to the tractor.
10. Check the overlap of the cylinders.

⚠ **Never use the machine if it has a damaged PTO protection cap! First replace the cap!**

4.2 USING THE PTO

The following items must be checked for correct use of the PTO:

1. During the Verti-Top operations the angle of the pivot pins is not permitted to be larger than 30 degrees.
2. The pivot pins must always be aligned.
3. The overlap of the cylinders must always be minimum 150 mm.
4. Never use the machine if it has a damaged PTO protection cap.

4.3 PTO INFORMATION AND MAINTENANCE

Concise maintenance schedule of the PTO

Scheduled maintenance:

- Grease the grease points every 100 hours of operation or after the PTO has been standing still for a long time.
- Check the PTO for damage to the protection caps and replace these caps if they are not satisfactory.
- Check whether the safety stickers on the PTO are still present and intact.

Annual maintenance:

- Disconnect the PTO from the machine.
- Inspect all the components of the PTO.
- All the damaged components should be replaced.
- Lay down all the components and look at them meticulously. If components are damaged or worn out, replace them.
- Clean all interlocking components.
- Reassemble all components.
- Grease both cylinders and reassemble both PTO parts.
- Assemble the PTO and mount it on the machine.

☞ **Please refer to the manual supplied with the PTO for further information about maintenance and disassembly of the PTO.**

⚠ **If the PTO has been shortened incorrectly or another tractor is used, the gearbox can become overloaded, potentially resulting in damage to the tractor and the Verti-Top!**

5.0 ATTACHING THE MACHINE TO THE TRACTOR

Checking procedure before starting to attach the Verti-Top.

- ?? Check the Verti-Top for visually discernable damage and repair this if safe operation of the machine is no longer guaranteed.
- ?? Check whether all the nuts and bolts are tight.
- ?? Check whether all protection caps and all safety stickers are present on the machine and are not damaged.
  NEVER use the machine without these items.

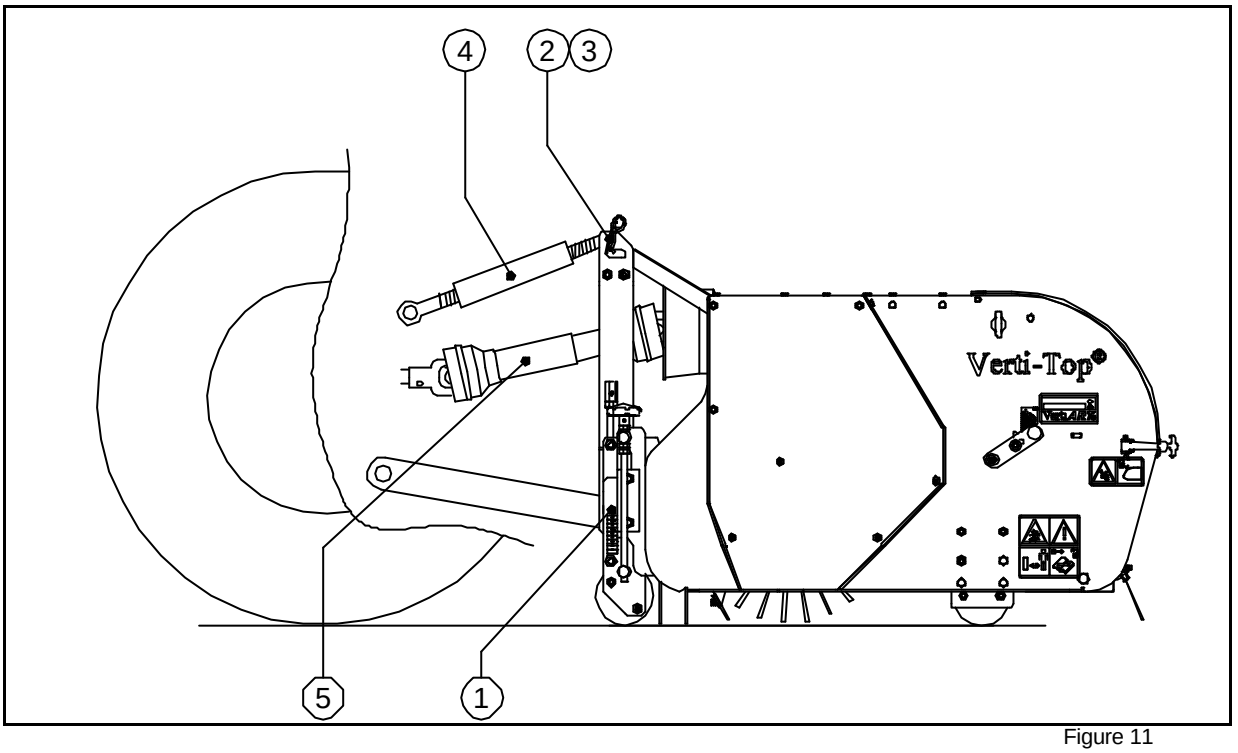

Figure 11

The Verti-Top can be attached to the tractor by means of the 3-point attachment.

The procedure is as follows (see Figure11):

1. Remove the 3-point pins (1 and 2).
2. Drive the tractor carefully backwards so that the lower connecting arms can be attached to the frame.
3. ⚠ **Make sure that the tractor is blocked well and cannot move on its own accord!**
4. ⚠ **Switch off the tractor before descending!**
5. Connect the lower connecting arms to the 3-point connecting plates using the pins (1) and secure these with the supplied locking pins.
6. Set the stabilizer of the tractor to 100 mm lateral stroke.
7. Mount the top rod of your tractor and turn it outward until it reaches the same height as the 3-point stop connection (3) (transport position) of the Verti-Top.
8. Connect the top rod (4) to the frame with the pin (2); secure the pin (2) with the supplied locking pin.
9. Turn the top rod inwards so that it becomes pressurized.
10. Mount the PTO (5) to the PTO axle of the tractor and the Verti-Top.
11. ⚠ **Make sure that all the securing pins are locked!**
12. Start the tractor and lift the Verti-Top off the subsoil.

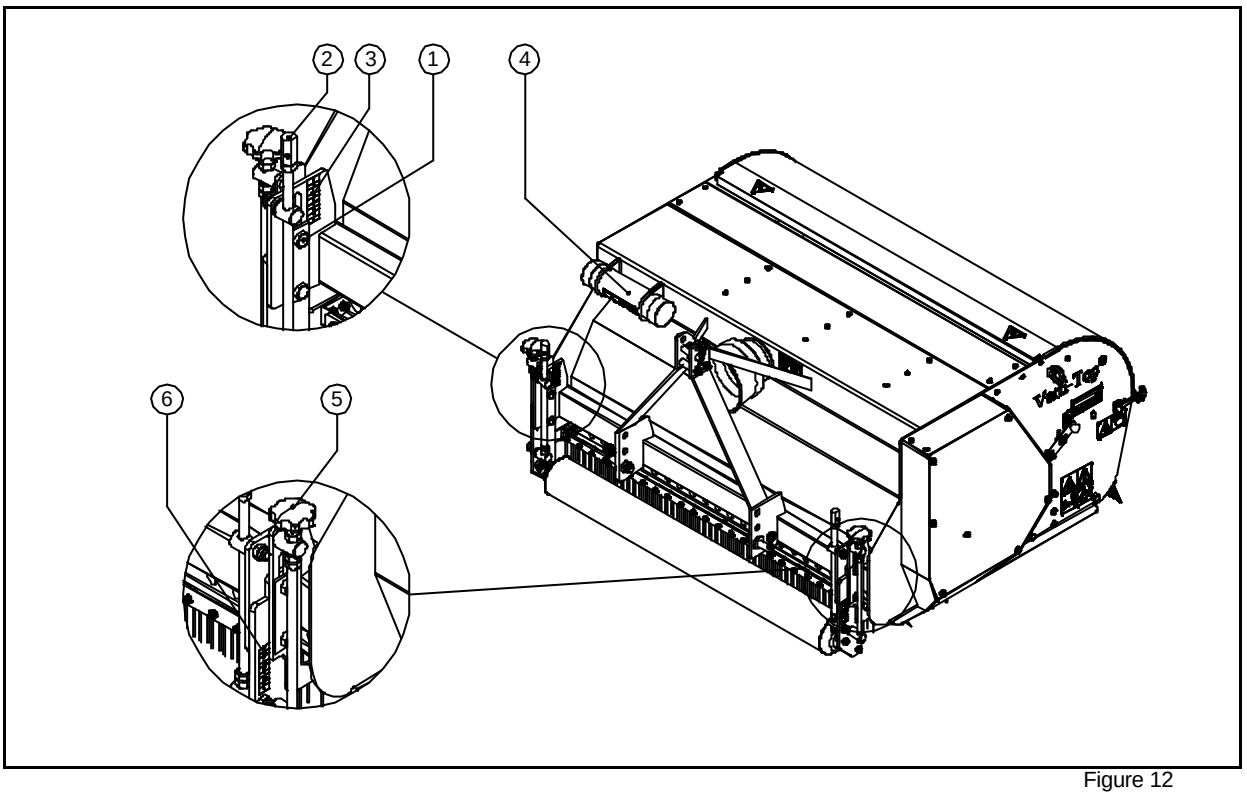

Figure 12

6.0 ADJUSTING THE WORKING DEPTH OF THE BRUSH

The working depth of the brush can be adjusted by adjusting the front roller by turning the spindles at the front side of the machine.

The procedure is as follows (see Figure 12):

⚠ **Make sure that the tractor/Verti-Top is blocked well and cannot move on its own accord!**

⚠ **Switch off the tractor before descending!**

1. Unscrew the bolts (1) a few turns on both sides of the machine.

   ☞ A set of keys is supplied with the machine; these are located in the toolbox (4).

2. Adjust the spindles (2) using the supplied keys in order to adjust the working depth.
3. Set both sides of the machine at the same height so that it is possible to clean the field evenly. For this purpose, use the indication stickers (3).
4. Screw the bolts (1) on both sides of the machine tight.

NEVER adjust the machine in such a way that it could damage the subsoil.

⚠ **IMPORTANT!**

First check the working depth on the subsoil statically *before* using the machine!

☞ Experience shows that the machine adjustment for top-layer cleaning is best if the brush hairs just don't touch the grass fibres.

6.1 ADJUSTING THE WORKING DEPTH OF RAKE

The working depth of the rake can be adjusted by turning the stellar knobs at the front side of the machine.

The procedure is as follows (see Figure 12):

⚠ **Make sure that the tractor/Verti-Top is blocked well and cannot move on its own accord!**

⚠ **Switch off the tractor before descending!**

1. Unscrew the bolts (1) a few turns on both sides of the machine.

   ☞ A set of keys is supplied with the machine; these are located in the toolbox (4).

2. Adjust the working depth by turning the stellar knobs (5).
3. Set both sides of the machine at the same height so that it is possible to clean the field evenly. For this purpose, use the indication stickers (6).
4. Screw the bolts (1) on both sides of the machine tight.

NEVER adjust the machine in such a way that it could damage the subsoil.

⚠ **IMPORTANT!**

First check the working depth on the subsoil statically *before* using the machine!

☞ Once set, the rake remains fixed at the same working depth even if the working depth of the brush is adjusted later.

7.0 ADJUSTING THE ANGLE OF THE JIGGING SIEVE

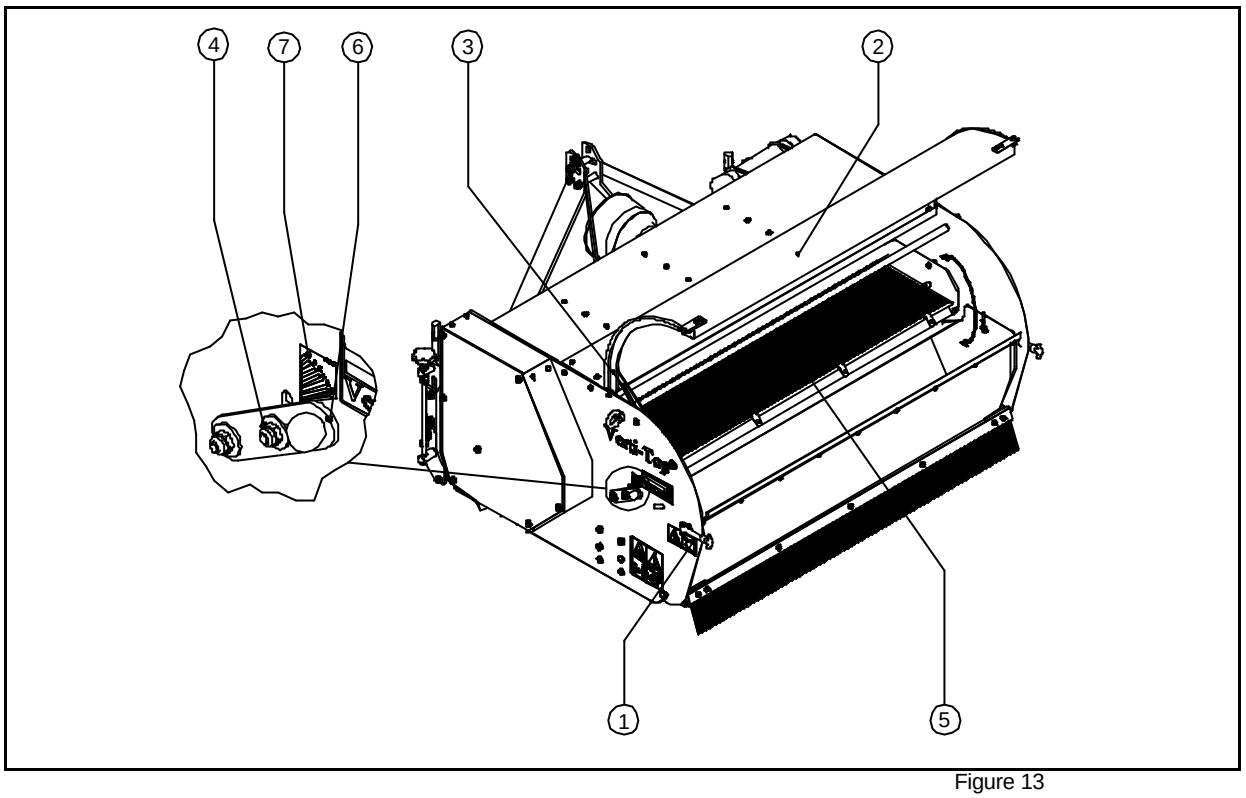

Figure 13

If the receptacle is catching too much material that should have been sieved, it is possible to allow the jigging sieve more time for sieving the material.
This is done by placing the jigging sieve under an angle.
The procedure is as follows (see Figure 13):

⚠ **Make sure that the tractor/Verti-Top is blocked well and cannot move on its own accord!**

⚠ **Switch off the tractor before descending!**

1. Open the latches (1) on both sides of the Verti-Top.
2. Open the inspection hatch (2) and block the hatch in the blocking strip (3).

⚠ **Make sure that the inspection hatch is blocked well and cannot fall shut on its own accord!**

3. Loosen the nuts (4) one turn on both sides of the machine.
4. Using the handles (6) on both sides, adjust the jigging sieve (5) so that it is parallel and at the required angle. For this purpose, make use of the indication sticker (7).
5. Tighten the bolts/nuts (4) on both sides of the machine.
6. Take the inspection hatch (2) out of the blocking strip (3).
7. Close the inspection hatch (2) carefully.

⚠ **BE CAREFUL not to get any parts of your body jammed!**

8. Secure the inspection hatch (2) with the latches (1) on both sides of the machine.

8.0 TRANSPORTING THE VERTI-TOP

The user is responsible for transporting the Verti-Top in back of the tractor over public roads. Verify the national legislation regarding the regulations.
On open fields while the machine is raised, the maximum permitted speed is 20 km/h (12.4 mph) due to the weight of the Verti-Top.
A higher speed can be dangerous for the driver and/or the public and can even damage the machine.

⚠ **Make sure that the uppermost top rod is attached and is pressurized in the transport position (see Figure 9)! If this is not done, the machine can incur serious damage.**

⚠ **When the machine is raised off the ground, the front axle of the tractor has to support minimum 20% of its weight.**

9.0 DRIVING SPEED

The driving speed is limited to 12 km/h (7.5mph).
It is NOT recommended to drive faster due to the fact that excessive wear & tear and damage can occur to the machine and to the subsoil.

10.0 USING THE VERTI-TOP

Before using the Verti-Top in a location, you should check the following items:

1. Are there loose objects in the field? First remove these objects.
2. Are there slopes? The maximum slope is 20 degrees for the Verti-Top. Always go from top to bottom.
3. Is there danger of flying objects (e.g., golf balls) that distract the attention of the driver? If so, the Verti-Top **CANNOT** be used.
4. Is there danger of sinking/sliding away? If so, postpone the Verti-Top processing until conditions improve.
5. If the soil is wet, postpone the activities until conditions improve.
6. If the machine vibrates too severely, return to the starting point with PTO speed.
7. A field can be worked two or three times in the same or different directions in order to obtain a better cleaning.
8. Do not make sharp bends and preferably, drive in straight lines; otherwise you might damage the subsoil.

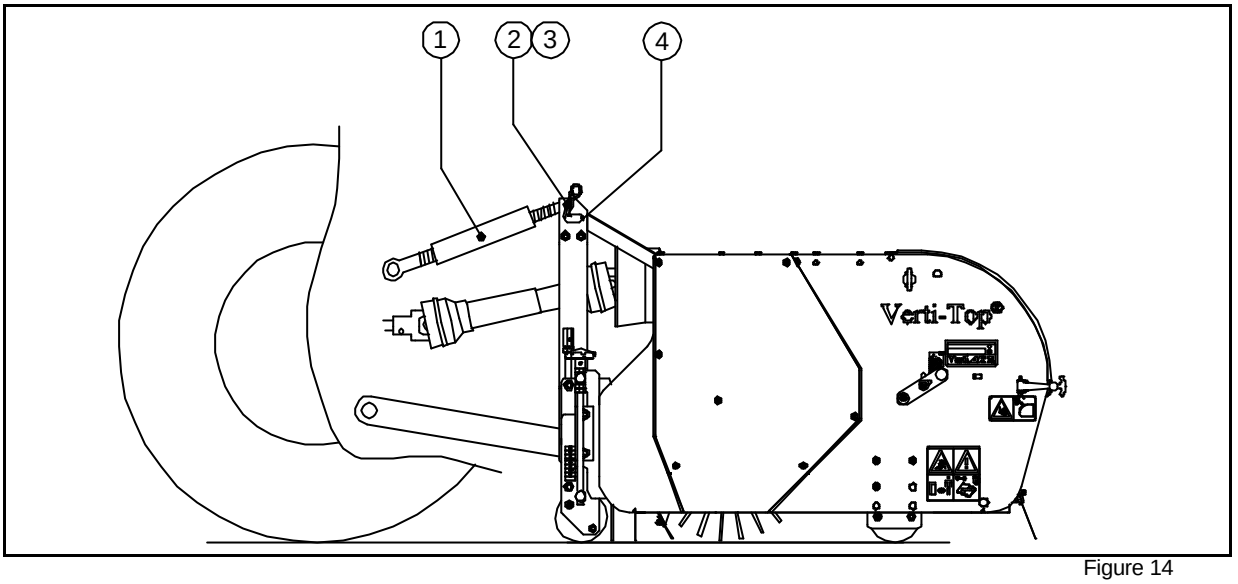

Figure 14

11.0 START/STOP PROCEDURE

The start procedure is **VERY** important. If this procedure is not executed as described below, serious damage to the machine / subsoil could be the result.

The start procedure is as follows (see Figure 14):

1. Check the Verti-Top for loose components and look whether all components function properly.

   ⚠ **If loose components are observed or components do not function properly, the problems must be solved *before* using the Verti-Top!**
2. Drive to the spot where the processing should take place.
3. Let the Verti-Top sink into the subsoil with a smooth movement.
4. Adjust the working depth of the machine statically as described in Chapter 6.0 and adjust the rake as described in Chapter 6.1.

   ⚠ **Make sure that the tractor is blocked well and cannot move on its own accord!**

   ⚠ **Switch off the tractor before descending!**
5. If required, the top rod can be placed in the slotted hole (4) in the terrain-following operating position.
6. Raise the Verti-Top and drive to the starting point.
7. Let the machine drop until the machine hovers above the ground at approx. 50 mm.
8. Engage the tractor in the correct gear.
9. Switch on the PTO with a low number of motor revolutions.
10. Raise the number of PTO revolutions to approx. 300 rpm.
11. Set the tractor in forward motion and let the Verti-Top sink onto the pre-adjusted bearing rollers with a smooth movement.
12. Raise the number of PTO revolutions to the maximum value of 540 rpm.
13. Increase the driving speed to maximum 12 km/h (7.5 mph).

Stopping occurs as follows:

1. While driving, raise the machine with a smooth movement until the machine hovers above the ground at approx. 50 mm.
2. Stop the PTO and raise the machine even further.
3. Drive to the next location and start the operation as described above.

12.0 EMPTYING THE WASTE RECEPTACLE

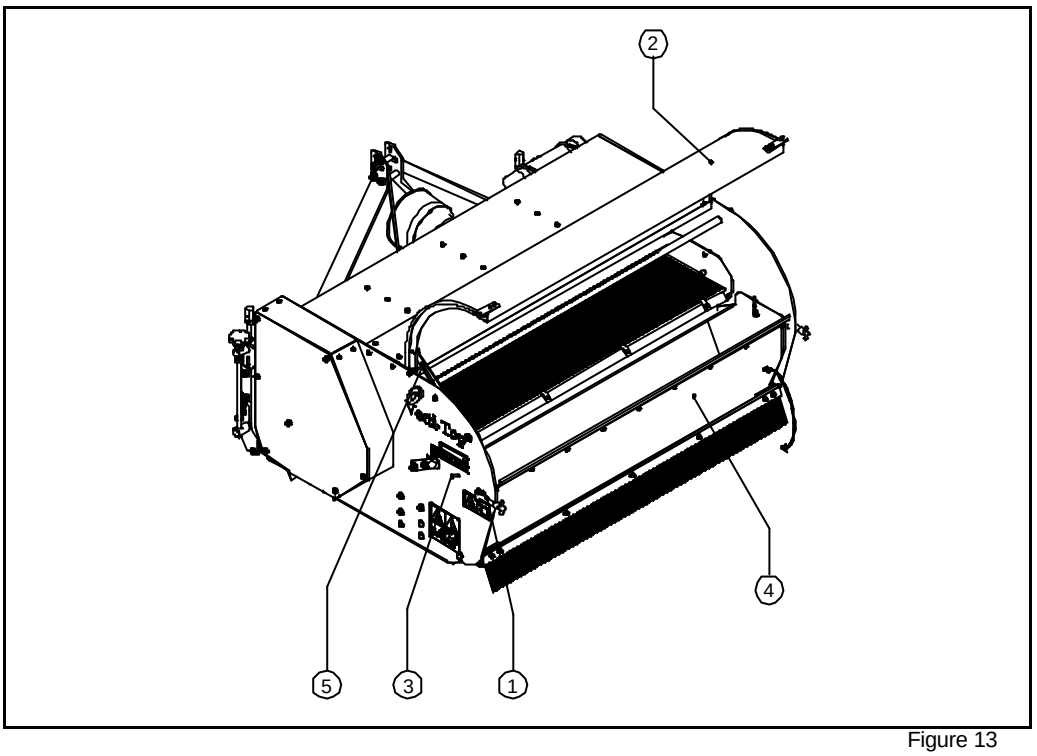

Figure 13

The waste receptacle should be emptied when the receptacle is full.
The procedure is as follows (see Figure 13):

1. Drive the Verti-Top to the waste-collection dump.

   ⚠ **Make sure that the tractor is blocked well and cannot move on its own accord!**

   ⚠ **Switch off the tractor before descending!**

2. Open the latches (1) on both sides of the Verti-Top.
3. Open the inspection hatch (2) and block the hatch in the blocking strip (5).

   ⚠ **Make sure that the inspection hatch is blocked well and cannot fall shut on its own accord!**

4. Remove the pins (3) together with the safety clips from the side panels of the machine.
5. Tip over the waste receptacle carefully and let it rest against the bottom stop.
6. Remove the excess waste from the waste receptacle (4).
7. Turn the waste receptacle (4) upwards.
8. Mount the pins (3) and the safety clips.
9. Take the inspection hatch (2) out of the blocking strip.
10. Close the inspection hatch (2) carefully.

    ⚠ **BE CAREFUL not to get any parts of your body jammed!**

11. Secure the inspection hatch (2) with the latches (1) on both sides of the machine.

☞ **Remove waste according to the applicable stipulations of the local legislation**.

13.0 DETACHING THE VERTI-TOP

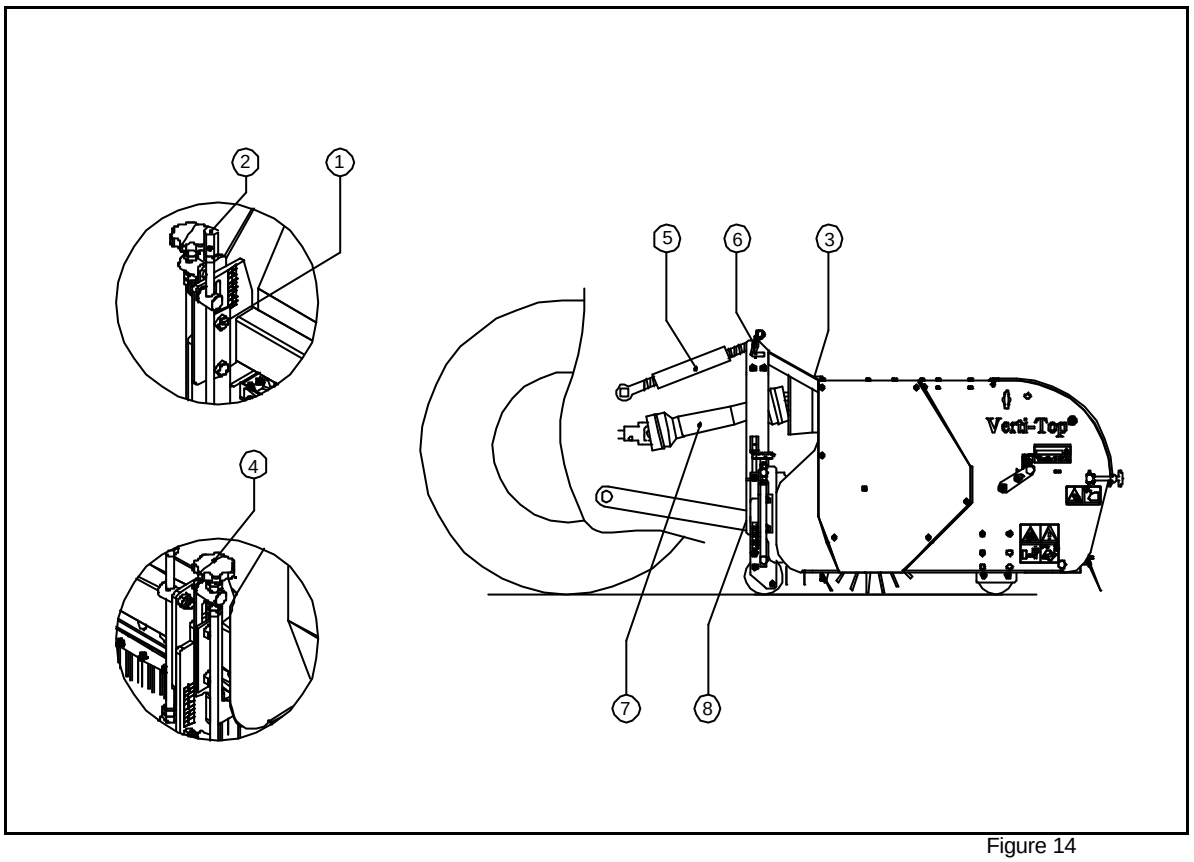

Figure 14

The machine can be detached from the tractor in the following manner (See Figure 14):

1. Drive the Verti-Top to a parking area with a firm/flat surface.

⚠ **Make sure that the tractor is blocked well and cannot move on its own accord!**

⚠ **Switch off the tractor before descending!**

2. Loosen the bolts (1).
3. Unscrew the front roller with the spindles (2) so that the front roller drops to a maximum. Use the keys from the toolbox (3).
4. Using stellar knobs (4), screw in the rake section sufficiently deep so that the rake section cannot touch the subsoil when putting the machine down.
5. Carefully drop the Verti-Top to the subsoil.
6. Release the top rod (5).
7. Take the locking pin out of the pin (6) and pull the pin out of the top rod connection.
8. Detach the PTO.
9. Pull the locking pins out of the pins (8) and remove the lowest three-point arms.
10. ⚠ **Make sure that the Verti-Top stands stable and cannot roll away and/or slide off!**
11. Start the tractor and drive off.

☞ **When putting away the machine, it is advised not to have the brush touch the subsoil or any other objects in order to prevent the risk of bending the brush hairs.**

⚠ **The top rod should be mounted and adjusted in the transport position for transporting the Verti-Top in order to prevent damage to the machine and/or tractor (see Chapter 8.0)!**

14.0 TROUBLE SHOOTING (PROBLEM ANALYSIS)

Problem	Possible cause	Solution
The waste receptacle has collected too much material that needs to be cleaned	Too high PTO rpm.	Lower the PTO rpm
	Jigging sieve is adjusted too flat	Adjust the jigging sieve more under an angle (see Ch. 7.0)
	Working depth is adjusted too deep	Adjust the machine to less depth
	Jigging sieve is clogged.	Clean the jigging sieve
	Driving speed is too low	Increase the driving speed
	Surroundings are too wet	Wait till surroundings are dried up. Use a sieve with a larger mesh.
Too little cleaning	Working depth is adjusted too shallow	Adjust the machine to more depth
	Driving speed is too high	Lower the driving speed
	Sieve with too large a mesh	Replace sieve with a smaller meshed sieve
	Brush is worn out	Replace brush
	PTO speed is too low	Increase PTO speed
	Outlet opening of the brush is blocked.	Remove blockage
	V-belts are slipping	Tighten the V-belts (see Ch. 16.1)
Sloppy image of the field after processing	Machine is adjusted too deep	Adjust the machine to less depth
	Sliding brush is damaged.	Replace or repair
Squeaking noises during the machine's operation	Bearings need greasing or are worn out.	Grease the bearings with EP2 grease or replace them.

15.0 EU DECLARATION

We – Redexim BV, Utrechtseweg 127, 3702 AC Zeist, Holland – declare entirely under our own responsibility that the product

VERTI-TOP with a machine number as indicated on the machine and indicated in this manual

to which this declaration refers, complies with the NEN-EN-ISO 12100-1, NEN-EN-ISO 12100-2 and NEN-EN 294 norms according to the stipulation of the 98/37/EC machine directive.

A.C. Bos
Manager Operations & Logistics
Redexim Holland

16.0 MAINTENANCE

Time schedule	Check/Grease point	Method
Before **every** use	Check for loose bolts/nuts	Tighten loose bolts/nuts with the correct tightening moment
	Presence and readability of the safety stickers (Please refer to Figure 5)	Replace these if not present or damaged
After the **first** 20 working hours (new or repaired)	Grease the roller bearings of the front and rear roller and of the driveline	Use EP2 grease
	Check for loose bolts/nuts	Tighten loose bolts/nuts with the correct tightening moment
	Check the tension of the V-belts	If necessary, adjust the tension of the V-belts (see Ch. 16.1)
After **every** 100 working hours or annually	Grease the roller bearings of the front and rear roller and of the driveline	Use EP2 grease
	Check the gearbox for oil leakage	Replace or repair
	Check the oil level in the gearbox	If necessary, top it up until the edge of the filling opening
	Check for loose bolts/nuts	Tighten loose bolts/nuts with the correct tightening moment
	Check the tension of the V-belts / wear & tear	If necessary, adjust the tension of the V-belts (see Ch. 16.1) or – if necessary – replace the V-belts
	Check the wear of the brushes	**Rotating Brush:** If necessary, replace brush **Sliding brush:** If necessary, replace or repair
	Check and grease the PTO axle	See the PTO manual

16.1 ADJUSTING THE TENSION OF THE V-BELTS

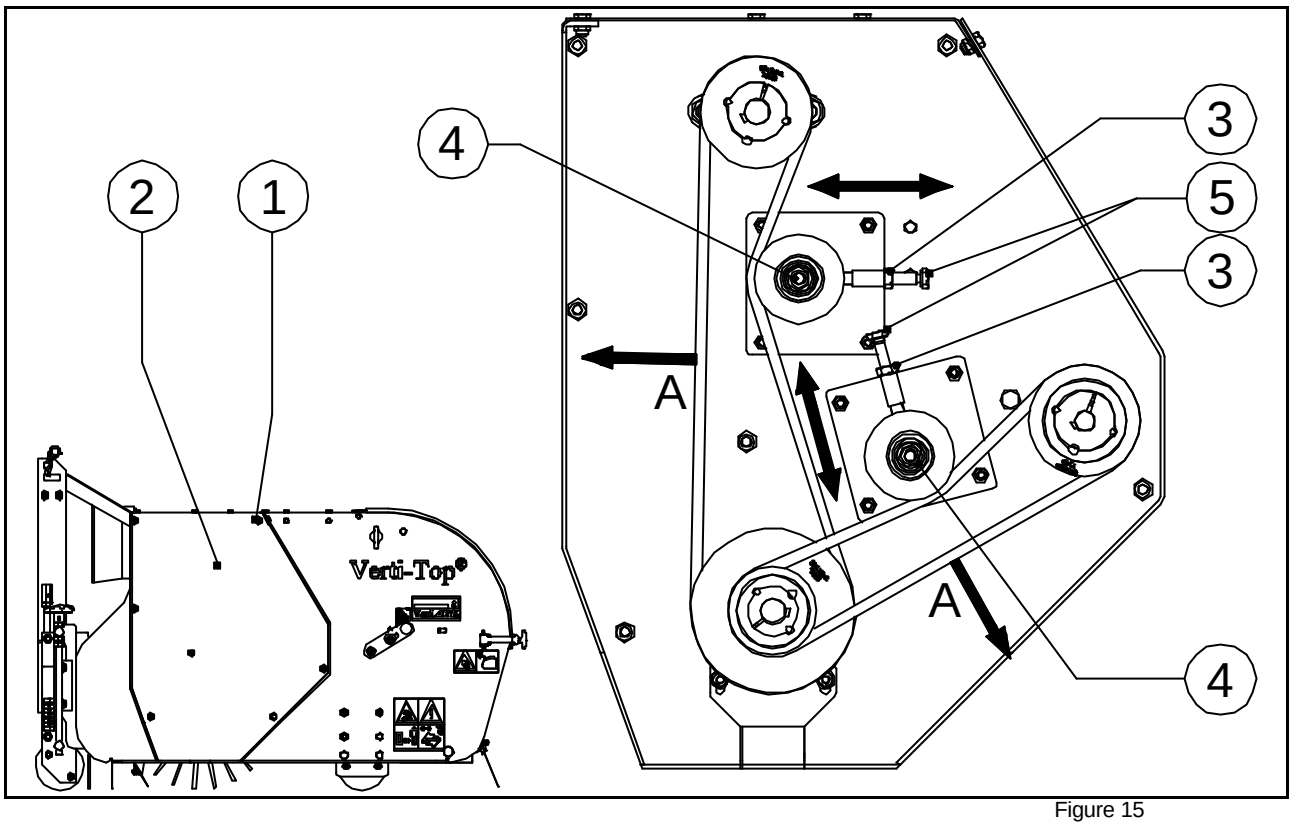

Figure 15

The Verti-Top is standard equipped with adjustable tension pulleys that keep the V-belts taut.
Depending on the intensity of using the machine, wear and tear can occur to the driveline resulting in slipping of the V-belts. These V-belts should then be tightened.

Adjusting the tension pulleys is done as follows (see Figure 15):

⚠ **Make sure that the Verti-Top is blocked well and cannot move on its own accord!**

⚠ **Make sure that the PTO axle is detached from the Verti-Top!**

1. Remove all nuts (1) and the safety cap (2).
2. Loosen the lock nut (3).
3. Loosen the nut (4) slightly so that the tension is just off.
4. Adjust the bolt (5) and adjust with this the tension of the V-belts by moving the tension pulley.
5. Check the tension of the V-belt by pulling on point A with a tension of 4.5 kg (9.9lbs). The stretch should be 2 mm (0.08”).
6. Tighten the nut (4).
7. Tighten the lock nut (3).
8. Return the safety cap (2) to its location and mount all nuts (1).

16.2 CHANGING THE JIGGING SIEVE

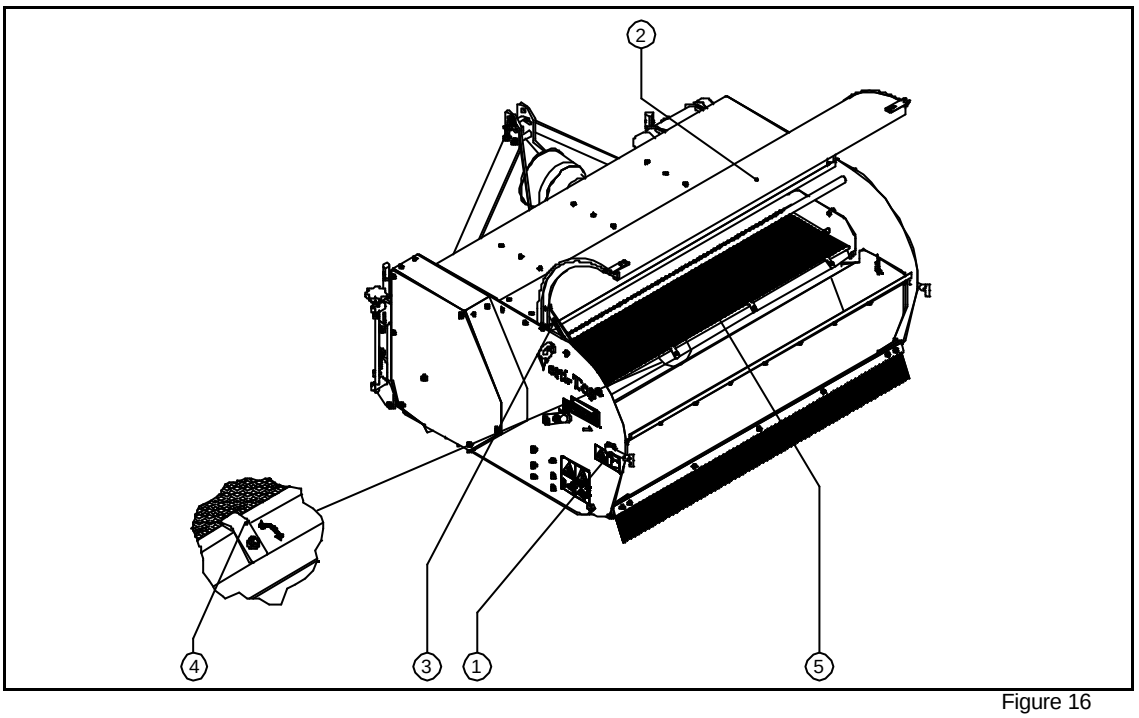

Figure 16

Verti-Top comes with seven different interchangeable meshes for processing the different types of materials.
Changing the jigging sieve is done as follows (see Figure 16):

⚠ **Make sure that the Verti-Top is blocked well and cannot move on its own accord!**

1. Open the latches (1) on both sides of the Verti-Top.
2. Open the inspection hatch (2) and block the hatch in the blocking strip (3).

⚠ **Make sure that the inspection hatch is blocked well and cannot fall shut on its own accord!**

3. Turn the clips (4) a quarter of a turn so that the sieve becomes undone.
4. Remove the sieve (5) and replace this one with another sieve.
5. Turn the clips (4) back so that the sieve is blocked.
6. Take the inspection hatch (2) out of the blocking strip (3).
7. Close the inspection hatch (2) carefully.

⚠ **BE CAREFUL not to get any parts of your body jammed!**

8. Secure the inspection hatch (2) with the latches (1) on both sides of the machine.

17.0 OPTIONS FOR OTHER JIGGING SIEVES

It is possible to mount another sieve with a larger or smaller mesh if a different type of material has to be sieved or the material has other dimensions for which the standard mounted jigging sieve is inadequate.

The following sieves are available for the Verti-Top:

Mesh (mm)	Mesh (inch)	Spare part number
3.2x3.2	0.13x0.13	458.441.431
4x4	0.16x0.16	458.441.432
5x5	0.2x0.2	458.441.430 (Standard)
5.5x5.5	0.21x0.21	458.441.433
6x6	0.24x0.24	458.441.434

17.1 OPTIONS FOR THE VACUUM-UNIT (247.150.000).

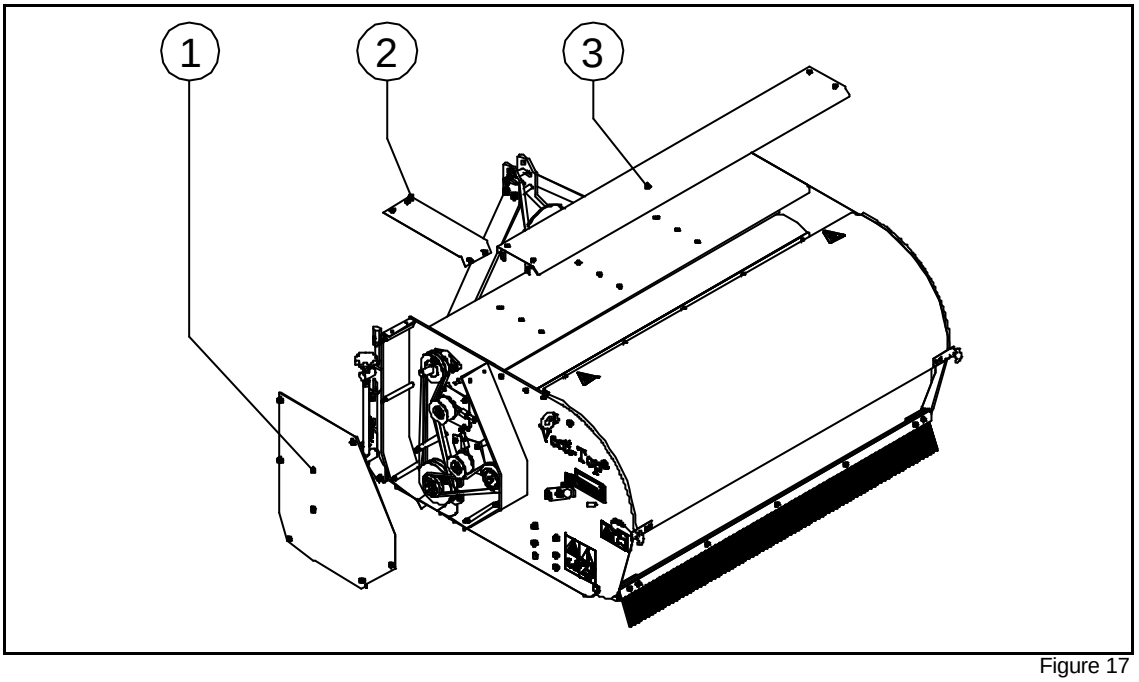

Figure 17

A vacuum-unit (article number 247.150.000) for the Verti-Top is available for more intensive cleaning in which lighter and more dust-like fouling is also removed.
The manner in which the vacuum-unit is built onto a standard Verti-Top is described below.

⚠ **Make sure that the Verti-Top is blocked well and cannot move on its own accord!**

⚠ **Make sure that the PTO axle is detached from the Verti-Top!**

1. Remove the safety caps (1, 2 and 3).
   Safety caps (2 and 3) are not returned to their location (see Figure 17).

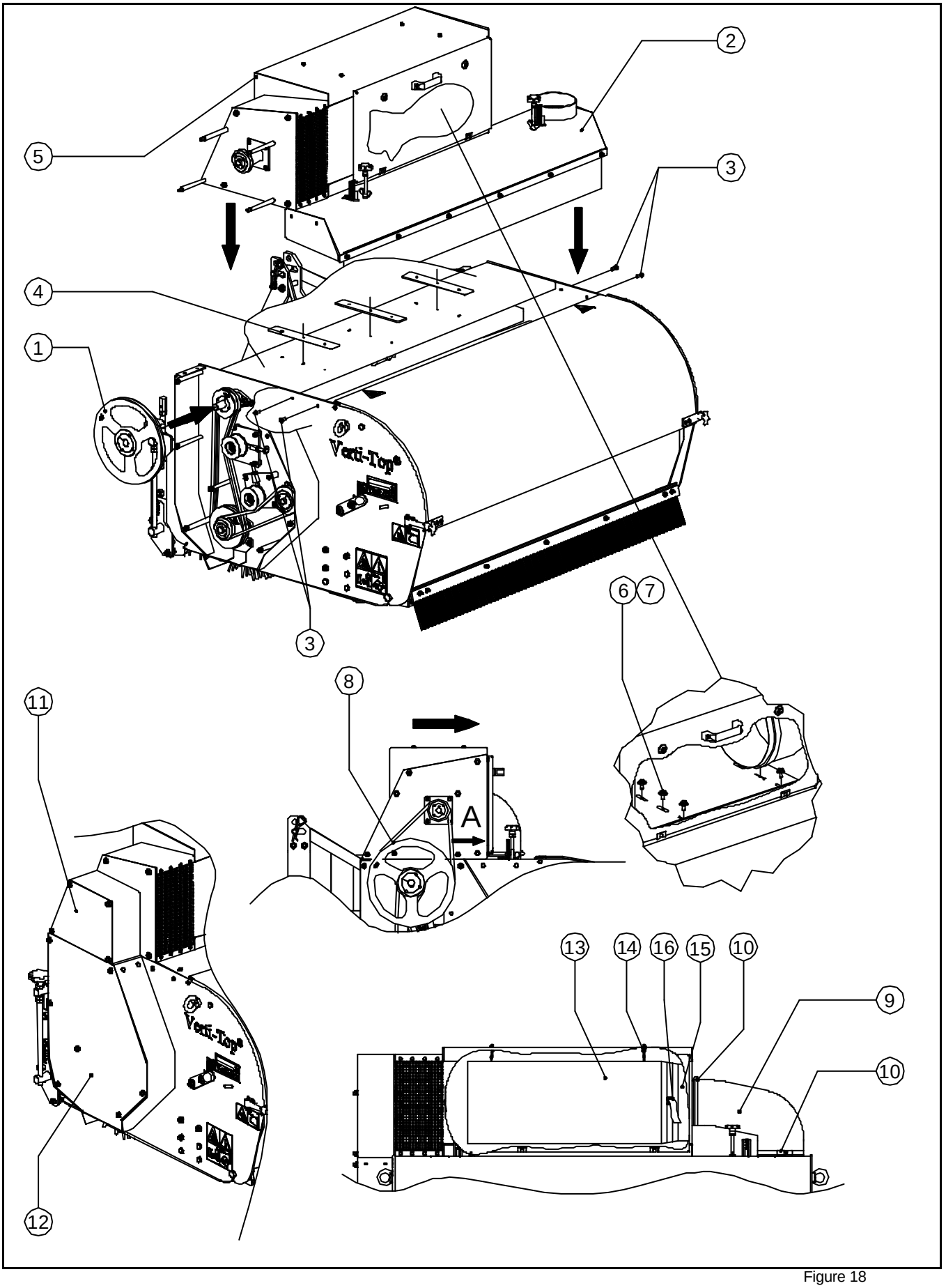

Figure 18

See Figure 18

2. Mount the pulley (1) on the drive shaft with the supplied taper-lock bus.
3. Mount the extractor (2) and tighten it with the supplied M8x20.3 bolts.
4. Place the strips (4) on the Verti-Top aligned with the tapped holes.
5. Open the vacuum box (5).
6. Place the vacuum box (5) on top of the strips (4) and bolt it loosely with the supplied M8x20 bolts (6) and rings (7).
7. Mount the V-belt (8) and align it.
8. Tighten the V-belt (8) by moving vacuum box 5 until you reach the correct tension.
9. Check the tension of the V-belt by pulling on point A with a tension of 4.5 kg (9.9lbs). The stretch should be 2 mm (0.08").
10. Tighten the M8x20 bolts (6) in the vacuum box.
11. Mount the hose (9) between the vacuum box (5) and the extractor (2) using the hose clips (10).
12. Check whether there are components that run out of true and whether all components are mounted well and tight.
13. Mount the safety caps (11 and 12).
14. Hang the dust bag (13) on the hooks (14) and fixed to the suction mouth (15).
15. Tighten the taut band (16).
16. Close the vacuum box (5).

17.1.1 SETTING THE SUCTION FORCE

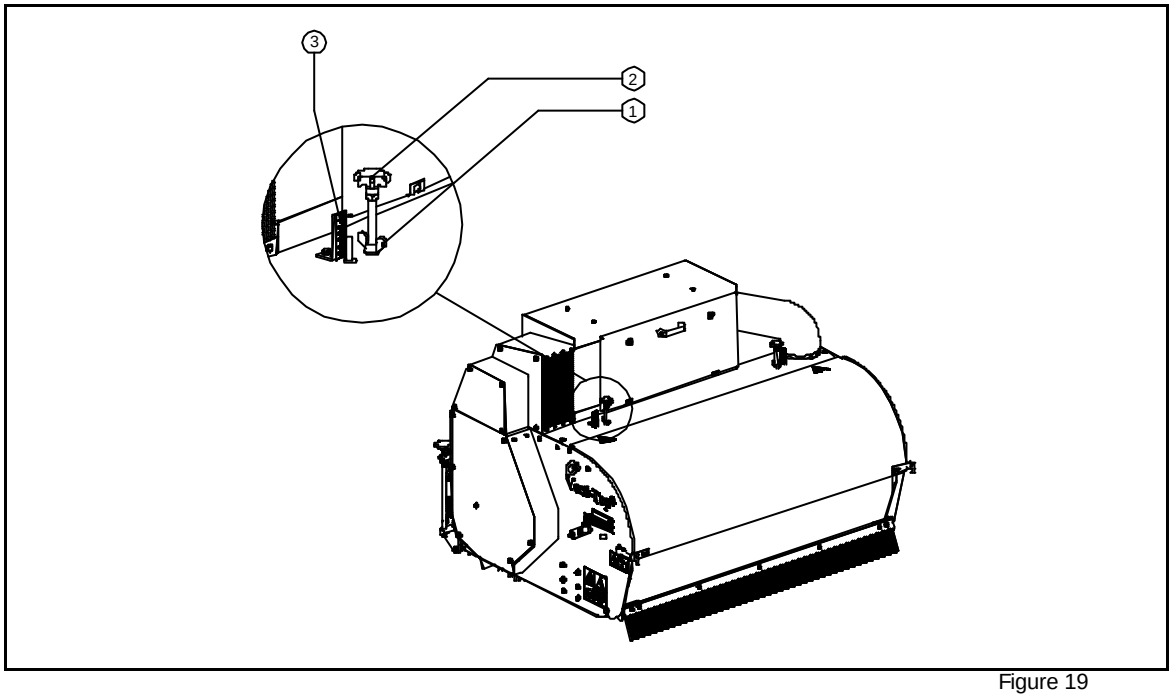

Figure 19

The suction force can be adjusted on the vacuum-unit.
The procedure is as follows (see Figure 19):

⚠ **Make sure that the Verti-Top is blocked well and cannot move on its own accord!**

1. Loosen the wing nut (1) and adjust the stellar knob (2).
   Adjust both sides of the machine in a parallel manner. For this purpose, use the indication sticker (3).

   Downwards = Less suction force
   Upwards = More suction force
   Standard setting = 2

2. Tighten the wing nut (1) when you have reached the desired setting.

17.1.2 START/STOP PROCEDURE OF THE VACUUM-UNIT

Since the vacuum-unit is integrated with the basic Verti-Top machine, additional settings for the vacuum-unit are not required. Only the desired suction force setting is needed (see Chapter 17.1.1).

⚠ **When using the Verti-Top/Vacuum-Unit combination, protect yourself against hearing impairment by using the proper protection gear!**

17.1.3 EMPTYING THE DUST BAG

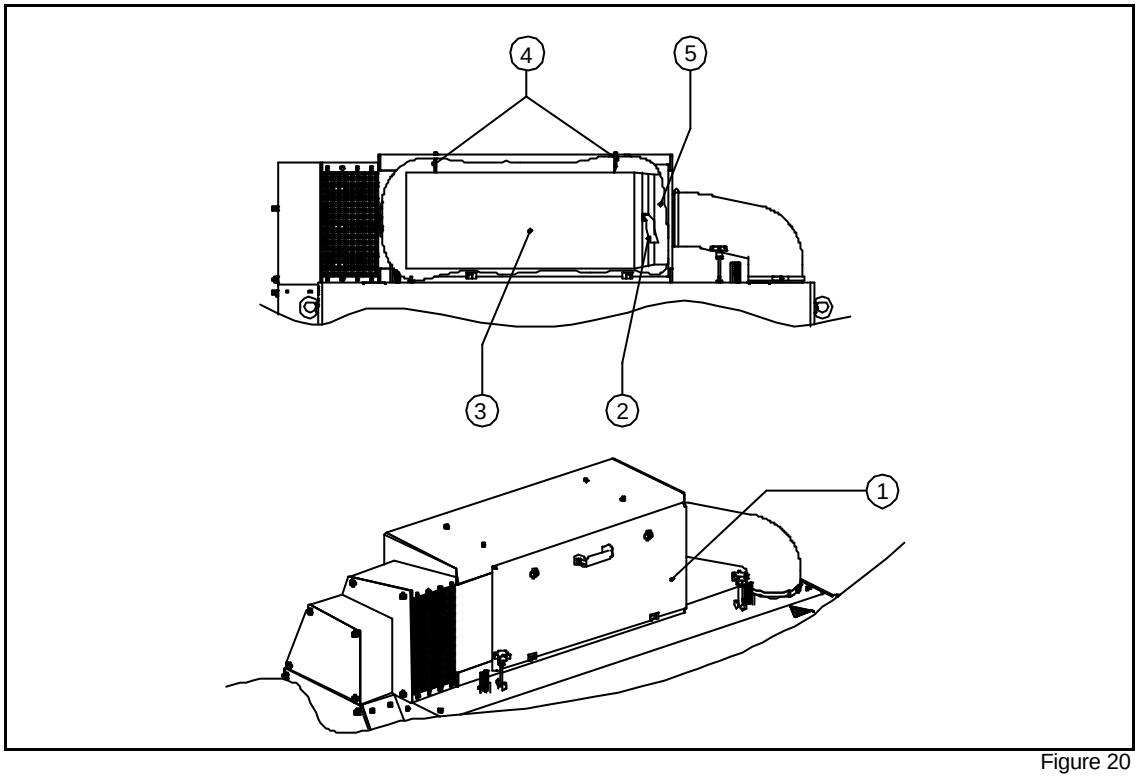

Figure 20

Emptying the dust bag is done as follows (see Figure 20):

⚠ **Make sure that the tractor/Verti-Top is blocked well and cannot move on its own accord!**

⚠ **Switch off the tractor before descending!**

⚠ **Make sure that the Verti-Top can no longer operate when emptying the dust bag!**

⚠ **Wear the proper personal protection gear when emptying the dust bag!**

1. Open the door (1) of the vacuum box.
2. Loosen the taut band (2).
3. Remove the dust bag (3) from the hooks (4) and take it out.
4. Empty the dust bag (3).
5. Hang the dust bag (3) on the hooks (4) and fixed to the suction mouth (15).
6. Tighten the taut band (2).

⚠ **BE CAREFUL not to get any parts of your body jammed!**

7. Close the door (1) of the vacuum box and lock it.

☞ **Remove waste according to the applicable stipulations of the local legislation**.